



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,916	09/18/2006	Asim Kumar Sarkar	294-231 PCT/US	4536

23869 7590 10/09/2008
HOFFMANN & BARON, LLP
6900 JERICHO TURNPIKE
SYOSSET, NY 11791

EXAMINER

REDDY, KARUNA P

ART UNIT	PAPER NUMBER
----------	--------------

1796

MAIL DATE	DELIVERY MODE
-----------	---------------

10/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,916	Applicant(s) SARKAR, ASIM KUMAR	
	Examiner KARUNA P. REDDY	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 15 and 16 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 15 and 16 is/are rejected.
- 7) ☒ Claim(s) 7-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 9/11/2008 has been entered. Claims 1 and 7 are amended. Accordingly, claims 1-16 are currently pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Objections

3. Claim 7 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In the present instance, claim 6 includes salts of an azo-initiator while the dependent claim 7 includes, in the list, azo-initiators that are not salts.

Art Unit: 1796

4. Claim 8 is objected to because of the broad and narrow range/limitation in the same claim: The claim recites both a broad recitation of “100 to 10 kg” and a narrow limitation “1 g to 25 kg”. Please make appropriate correction.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-9 and 15-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites “wherein a liquid vehicle is not required for stabilization of the initiator.” While there is support for “initiator is usually a solid compound, preferably in the form of a powder or granulate”, there is no support for the limitation that a liquid vehicle is not required in the originally filed disclosure.

Claims 2-9 and 15-16 are subsumed by this rejection because of their dependence on independent claim 1.

Claim Rejections - 35 USC § 103

Art Unit: 1796

7. Claims 1-9 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over McVay (US 3, 784, 005) in view of Amo et al (EP 0 668 098 A1) and Duffield et al (US 2003/0108705 A1).

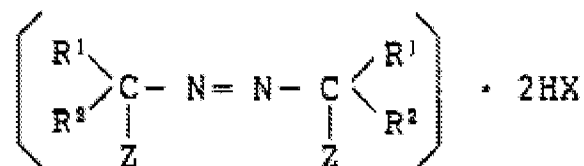
McVay et al disclose a package containing materials to be added to a resin formulation and comprises a thin-walled plastic envelope which is soluble in the resin formulation (abstract). After materials are placed inside the lined rigid container, the flaps are sealed to form an enclosed film package. The additive is intended to embrace any material which is added to a resin formulation and includes catalysts (column 1, lines 24-30). The additive package comprises an envelope made of a thin film of synthetic organic polymeric material which is soluble in at least one component of the resin formulation into which the additive is to be introduced. The resin formulation contains one or more components in which the thin film of organic polymeric material will dissolve i.e. one or more solvent components. The term "solvent component" is used in some of the claims to mean the component of the formulation which will dissolve the film (column 4, lines 18-30). McVay also contemplates an additive package which contains a plurality of additives. In cases where compatibility of additives is obtained only when they are in dry state, care should be exercised to place dry additives in the envelope (column 7, lines 56-63).

McVay is silent with respect to azo-initiator; water-soluble container/package and container comprising at least component selected from anti-foaming agent or diluent; amount of initiator in the container; and handling of the polymerization initiator system.

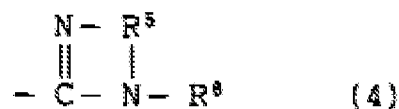
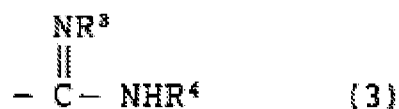
However, Amo et al teach that water-soluble azo-compounds have skin irritant action and spherical granules of water-soluble azo compound, which causes no dust,

Art Unit: 1796

are prepared in view of safety. Azo compounds are highly useful as radical polymerization initiators and are known by formula depicted below -



R^1 and R^2 are same or different and are each alkyl group or cycloalkyl group,
Z is a group represented by the formula (3) or formula (4)



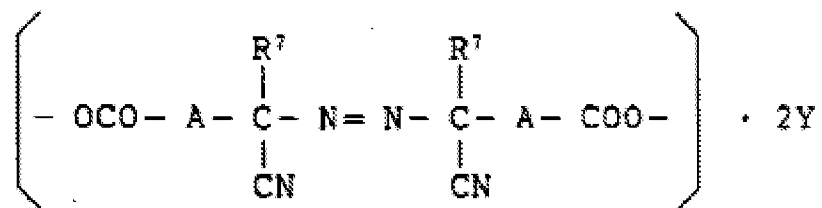
R^3 is hydrogen atom, alkyl, allyl, phenyl or substituted phenyl group,

R^4 is hydrogen atom, alkyl, phenyl or substituted phenyl group,

R^5 is alkylene or substituted alkylene group,

R^6 is hydrogen atom or hydroxyalkyl group,

X is Cl, Br or CH_3COO^- group



A is alkylene or substituted alkylene group,

R^7 is alkyl group,

Y is alkali metal, alkaline earth metal ($2Y$) or NH_4 .

See example 1 wherein 2, 2-azobisamidinopropane dihydrochloride is the azo polymerization initiator. Therefore, it would have been obvious to use spherical granular azo-initiators such as those shown above, based on the teachings of Amo et al, because McVay et al generically discloses that the additives, in dry state, can include catalysts and Amo et al teach azo polymerization initiators i.e. catalysts in spherical granular form for safety reasons and one of ordinary skill would have expected successful results for all catalysts, including azo initiators of Amo et al, absent evidence of unexpected results.

With respect to water-soluble container, Duffield et al teach water-soluble containers made of an injection molded polymer, for example, a poly(vinyl alcohol) and/or cellulose ether (paragraph 0011-0012). In order to ensure that the polymer such as poly(vinyl alcohol) or cellulose ether is capable of being injection molded, it is usual to incorporate plasticizers exemplified by glycols (paragraph 0041) and read on diluents of claim 9. Therefore, it would have been obvious to use a water-soluble container/package of Duffield et al, which is capable of being injection molded, because McVay contemplates using a package/container that is soluble in the resin formulation of reaction system and a known water-soluble container, that can be injection molded, would have been an obvious choice if the reaction is carried out in aqueous solution.

With respect to the amount of initiator, while none of the references elucidate that value, it is the examiner's position that initiator amount is a result-effective variable (MPEP 2144.5) since the amount used clearly affects the course of polymerization. Hence, the choice of a particular amount of initiator (such as the amount in present claims) is a matter of routine experimentation and would have been well within the skill level of one of ordinary skill in the art.

Art Unit: 1796

With respect to handling of the initiator in a water-soluble container, it is within the scope of a skilled artisan and is determined by logistics of the manufacturing site, absent evidence of criticality.

Response to Arguments

8. Applicant's arguments, filed 9/11/2008, with respect to the prior art rejections in paragraphs 7-8 of office action mailed 6/12/2008, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of McVay (US '005), Amo et al (EP '098) and Duffield et al (US '705).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

Art Unit: 1796

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. P. R./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796